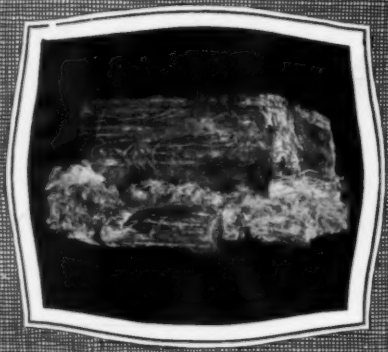
ASBESTOS

The Most Important Mineral in the World

Vol. 7 MAY 1926 No. 11



PUBLISHED BY
SECRETARIAL SERVICE
1701 WINTER STREET
Philadelphia, U.S.A.

... ASBESTOS ...

A MONTHLY MARKET JOURNAL

DEVOTED TO THE INTERESTS OF THE ASBESTOS AND MAGNESIA INDUSTRIES

A. S. ROSSITER - - - EDITOR

PUBLISHING OFFICE

246 NORTH 17th STREET

PHILADELPHIA, - PENNSYLVANIA

Entered As Second Class Matter November 23, 1923, at the Post Office at Philadelphia, Pennsylvania, Under Act of March 3, 1879

Volume VII MAY 1926 Number 11

CONTENTS

	Page
Efficient Insulation for High Pressure Steam Piping	3
Cork and Asbestos Walls	11
Fact and Fancy:	
Wyoming Asbestos	13
The Warm Air Heating Course Studies Insulation	13
Insulating a Great Cathedral	14
Amosite	16
Contractors and Distributors Page.	
The Line of Least Resistance	20
Wage Notes	22
Building Statistics	22
Need for Asbestos Knowledge	24
Hollywood Asbestos	27
Market Conditions	28
Brake Lines	32
Cooperation in Arizona	33
Crocidolite Jewelry	34
Tests on Brake Lining	36
Production Statistics	37
Sesqui Notes	38
Automobile Production	38
Imports and Exports	39
News of the Industry	42
Patents	45

SUBSCRIPTION PRICE

U. S., CANADA AND MEXICO - - $2.00 PER YEAR
FOREIGN COUNTRIES - - - 3.00 " "
SINGLE COPIES - - - - .25 EACH

The attractive office and warehouse front of Edward C. Fick & Co., Baltimore
Distributors of Asbestos Materials

Efficient Insulation for High Pressure Steam Piping

By Benjamin F. Betts, Associate Editor, The American Architect

2. Efficient Insulation Methods

Economical Thicknesses.

The selection of the most economical thickness of insulation depends upon the size of the pipe, difference in temperature between the steam and surrounding air, and the cost of fuel and handling, or the cost of steam per thousand pounds. Beyond a certain point the cost of increased thickness of insulation becomes out of proporton to the results obtained.

Heat losses from bare pipes under the same conditions become proportionately greater as the size of the pipe increases. Each foot of 2 inch horizontal pipe without covering will waste about 1.7 pounds of coal in 24 hours under a temperature difference of 300° F. Under the same conditions each foot of 10 inch pipe will waste nearly 7 pounds of coal. The effect of difference in temperature between the pipe and the surrounding air is appreciated when we learn that each foot of 10 inch pipe wastes 24 pounds of coal when the temperature difference is 600° F. It is a simple matter of arithmetic to see that better protective measures become essential as the cost of producing steam increases.

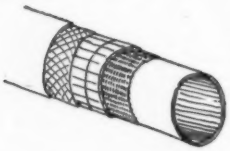
The conditions under which individual installations are made should always be given careful consideration in determining the thickness to be used. The following table may be taken as a guide for average conditions to obtain efficiency with economy.

Table of Thickness of Insulation for High Pressure Steam Piping

Temperature difference in degrees F.	Thickness of Insulation. For ½ in. to 1½ in. Pipes	For 2 in. to 4 in. Pipes	For Pipes over 4 in
300-400°	1 in.	1½ in.	2 in.
400-500°	1½ in.	2 in.	2½ in.
500-600°	2 in.	2½ in.	3 in.
600-700°	2 in.	3 in.	3½ in.
700-800°	2 in.	3½ in.	4 in.

Size and Form.

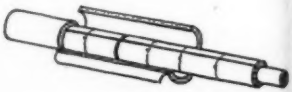
Sectional coverings as made by the majority of manufacturers range from 1 to 3 inches in thickness and 3 feet in length. These are split on one or two sides to facilitate application to the pipe and are covered with a canvas jacket. These coverings, of 85% magnesia, laminated asbestos cellular felt or of the high temperature lining type are made in sizes to fit all standard steam pipe up to and including 10 inches. A few manufacturers also make sectional covering for 12 inch pipe. Above 10 or 12



Blocks of the same material as used for the high pressure steam pipe covering are used to insulate boiler breechings, etc. The pipe is first covered with a self furring metal lath of heavy gauge, thus providing air space of ¾ in. between pipe and insulation, then the blocks are wired on, covered with wire mesh over which is applied a heavy coating of asbestos cement troweled smooth.

inches, sectional covering becomes impractical to handle or apply and flat, or segmental blocks must be used. These blocks are generally made and used in the 3 inch by 18 inch or 6 inch by 36 inch size. A few manufacturers also make these blocks, 6 inch by 18 inch, 12 inch by 18 inch, 12 inch by 36 inch and sheets 24 inch by 36 inch or 36 inch by 36 inch. The thickness of these blocks varies with the manufacturer. The usual range is from ½ inch or ⅞ inch to 4 inch. These blocks and sheets are also invaluable for insulating flat or surfaces of slight curvature, such as boilers, breechings and stacks.

The joints and seams of the first and second layers of insulation covering should be broken or staggered, and carefully sealed with asbestos cement.

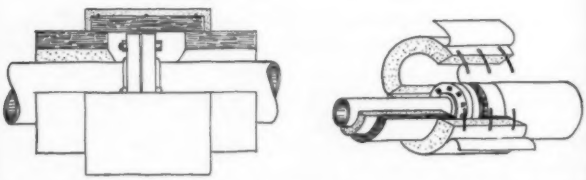


Efficient Application.

The purpose of insulation covering may be largely defeated even when the most suitable materials are used,

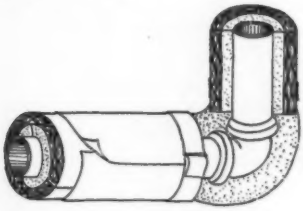
due to improper application or careless workmanship. Insulation on high pressure lines, 2 inches or more in thickness should be applied in two layers. The layer next the pipe should be wired on with annealed iron wire at intervals of 6 inches and the canvas jacket omitted from this covering. The sections must be butted tight and all joints completely filled with an asbestos insulating cement. Lack of care in this respect will result in heat losses thru the joints. The outer layer should break joints and seams with the first covering, and the same care should be used in cementing and sealing all joints. The canvas jacket regularly furnished should then be pasted down smooth with cold water paste.

For extreme conditions it is often advisable to cement the entire outside surface ½ inch thick to make sure that a perfect seal has been obtained. This canvas jacket is frequently used as the final covering, fastened in place with brass lacquered bands, and painted with cold water paint. For protection and the maintaining of good appearance, however, the value of a separate canvas jacket can not be over-emphasized. This should be of eight ounce canvas stitched on over sixteen pound asbestos paper. The canvas should be given one coat of size and followed with two coats of fire proof paint or white lead and oil.



Flange fittings require the same careful protection as the pipe. The left hand illustration shows a permanent flange insulation. The insulation should be wired on, well lapped over the pipe covering and finished with a coat of asbestos cement, not less than ½ in. thick. A removable and replaceable flange fitting cover is shown in the right hand illustration. The canvas jacket acts as a hinge and the protruding wires are used to secure the cover in position.

Much heat may be lost thru improper protection of pipe flanges and fittings. Removable and replaceable insulations for flanges are always advisable. Fittings are usually covered by several layers of asbestos cement applied in coats about ½ inch thick. Both flanges and fittings must have the same amount of protection as the adjacent pipe.



Ordinary fittings are usually covered with sufficient coats of asbestos insulating cement to protect them with the same thickness as the insulation used on the pipe. The illustration shows part of the insulation cut away both around the fitting and above it.

Relative Efficiencies

The relative values of different insulations may be determined by comparing the efficiencies or heat losses thru various types. Efficiencies also afford a means of comparing the savings effected thru the use of insulation with the losses experienced thru bare pipe. It is as impossible to prevent all heat losses and obtain 100% efficiency as it is to conserve all the heat value in fuel and prevent some part of its value from passing up the stack. No insulation improperly applied or used too thin for the duty involved will show reasonable efficiency. Care in the selection of the material, its thickness and application should save between 85% and 95% of the heat which would be lost thru bare pipe.

The following table is indicative of the efficiencies of various materials as compiled from different tests. For the purpose of comparison, the table is based upon the insulation of a 4 inch pipe when the difference in temperature between the pipe and surrounding air is 400° F.

Comparison of Efficiencies of Various Thickness and Types of Insulation for High Pressure Steam Piping

	1 in.	1½ in.	2 in.	2½ in.	3 in.
Laminated asbestos cellular felt	89-90	90-91	92-93	93-94	94-95
85% Magnesia	88-89	89-90	92	92.5-93	94
High Temperature Lining	88	90	91	92	93.5

(Table is based upon a 4 in. pipe with a temperature difference of 400° F.)

It has been claimed that insulation on high pressure steam lines pays for itself, in from three to six months. Accurate and carefully conducted tests under working conditions are the only sure methods of actually determining the savings in dollars and cents, but the experience of others can be at least taken as a safe guide that proper insulation of high pressure steam piping is a good investment and an economic necessity.

Cork and Asbestos Walls

Professor A. P. Laurie, Principal of the Heriot Watt College at Edinburgh, has devised a new form of construction in order that plasterers may not be needed for finishing the internal walls of small houses. He is using a combination of asbestos-cement sheets which are widely used by builders, and sheets made of fragments of cork such as are used by cold-storage companies. These cork sheets, when pressed and heated, are excellent non-conductors both of sound and heat.

Professor Laurie cements the asbestos-cement sheets to a cork core one inch thick. Thus he obtains a panel measuring 8 ft. by 4 ft. and 1½" inches thick. This can be erected between light wooden supports of T-section running from floor to ceiling at intervals of four feet. This rigid panel makes substantial partition walls.

When dealing with the inner linings of the outer walls, Professor Laurie has found it to be the best plan to revert to the old solid 9 in. wall. He lines this inside with asbestos-cement sheets with a thin layer of compressed cork cemented to the sheet and forming a lining between the sheet and the brick wall. Upright T-sections hold the panels to the wall.

FACT AND FANCY

Wyoming Asbestos.

Most specimens of Wyoming Asbestos which have been brought to our notice are very brittle, harsh and short, and while the Wyoming Deposits have been developed to some small extent and used by local industries, particularly in the manufacture of chimneys, the quality of the material together with the high freight rate to the East has effectually barred Wyoming Asbestos from the Eastern Market.

Therefore, when a gentleman called at our office the other day and said he was in some way interested in a Wyoming Asbestos Deposit, we gave him scant encouragement.

We told him frankly that all Wyoming Asbestos we had seen was very short, very brittle and had no strength, therefore of practically no interest to the Eastern buyer. Finally, however, he unpacked his specimens, and we were forced to change our viewpoint. The specimens he carried were rather silky in appearance, fairly strong and some of them measured over ¾ inch in length.

Whlie this material is most certainly not on a par with Canadian Crude at the same time it undoubtedly could be spun, and therefore merits some attention.

If anyone is interested we will gladly put them in touch with the gentleman in question, who has an office in New York City.

The Warm Air Heating Course Studies Insulation.

Last month mention was made of the Warm Air Heating Course being held as evening classes in the Chicago Public Schools, but at that time we had no exact knowledge of how the subject of insulation was handled, or, indeed, whether it was taken up at all.

The subject of insulation was given a fair amount of attention on the eighth night, by Professor V. S. Day of the University of Illinois. Prof. Day talked three hours, covering various problems of warm air heating, and as

he used non-technical, rather than technical language, the men found it unusually interesting besides being informative.

In discussing the insulation of the furnace, Prof. Day touched first upon the test where the University men insulated the furnace bonnet and front. In this test, conducted by the University, the laboratory furnace was insulated with 1½ inch of corrugated asbestos blocks on the casing and 2 inch asbestos blocks on the iron furnace front. Prof. Day first touched on the method of insulation and then went on to explain that the iron front was the greatest loser of heat. A slide was shown giving figures which indicated that the insulation was effective.

The Professor also reviewed the tests on furnace pipe covering as carried out on steam containing drums.

The subject of insulation for warm air heating plants was therefore fairly well covered.

Insulating a Great Cathedral.

In these days of hurried building activity, the principal object in view is generally the finishing of a building in the shortest possible time, without regard to the lasting qualities of the building itself or the materials therein.

The stupendous proportions of the Cathedral of St. John the Divine in New York City, has made it a matter of interest to everyone. Here the aim is to build a structure capable of lasting 2,000 years, and, naturally, under those conditions, the most durable materials are used. A description of the steam pipes and their insulation will probably be of interest.

The steam pipes are of double, extra strong wrought iron pipe, five eighths of an inch thick, with an interior diameter of two and one-half or three inches. They are covered with pitch, then with a thick covering of 85 % Magnesia, and then with two thicknesses of two-ply asphaltic roofing, wired on. Insofar as possible, provision has been made for the removal and replacement of this piping.

The roof water or leader pipes are also insulated. The

pipe itself is six inches in diameter and of extra heavy copper, one third of an inch thick, with fittings of heavy cast brass. The pipe is coated with pitch, wrapped with two inches of insulation made of roofing felt and asphaltic roofing, and built solidly into the masonry, all sharp angles being avoided. Should the pipes deteriorate in a few hundred years it is quite possible that the masonry openings would carry down the roof water.

Amosite.

The demand for Amosite of all grades continues to develop strongly. The best grades have been in demand for the manufacture of textiles, while the lower grade has been proved to be eminently suitable for the manufacture of asbestos cement products.

At present inquiries for this material in the States are fairly numerous. Japan is also an insistent buyer. In Spain chemically pure Amosite cloth has sold readily, it being used very largely for Asbestos Mattresses for the covering of locomotive boilers for the State Railways. It is indeed fortunate that this material should come on the market at a time when the production of blue textiles is becoming more difficult because the supply of long blue crude cannot keep pace with the demand.

As our readers know, the chemical properties of Amosite are very similar to those of blue asbestos, and it is therefore particularly serviceable for the chemical industries, especially where filtration cloths showing a high acid resistance are employed. The insulation qualities of Amosite are likewise of a high order and its tensile strength second only to that of blue asbestos.

The Thirty-second Semi-Annual Meeting of the American Society of Heating & Ventilating Engineers, will be held at Lexington, Ky., May 26 to 28. The program for this meeting looks unusually interesting, and our readers will be particularly interested in two of the papers to be read at the first session. One of these papers is "An Experiment in Insulating a House" by H. S. Ashenhurst and S. R. Lewis, of Chicago; and the other "Some

Results in Heat Transmission Investigation'' by F. B. Rowley of the University of Minnesota.

Copies of these papers will be supplied this office for review in our columns.

The Norman W. Henley Publishing Company has just issued a new 1926 catalogue of practical books for practical men, covering books on the Automobile, Aviation, Hydraulics, Rubber, etc., etc. A copy of this catalogue will be sent on request, the address of the Company being No. 2 W. 45th St., New York City.

The broad general rule is that a man is about as big as the things that make him mad.—Detroit News.

CONTRACTORS AND DISTRIBUTORS PAGE

Quality or Cut Price—The Line of Least Resistance

Superficially, the cut price method of selling appears to be the easiest one, and, to judge from the actions of some salesmen we naturally conclude it is the only method. Indeed many salesmen would have us believe that to be the truth and are ever diligent in impressing the fact on their employers.

We agree with the salesman that it offers the line of least resistance—so far as the customer is concerned, and for the present moment and the present sale. The resistance comes from his employer, and, at a future date, from his customer.

Of course it is easier for the salesman to cut the price and get the order quickly than it would be to sell his cusomer on quality. When cutting the price he doesn't have to build any ground work as he would in selling on quality. And the salesman experienced in cut price methods can often so juggle things that he obtains the order at just a trifle under his competitor's price, thereby getting the order without too much cut in profit.

Whether or not he is justified in pursuing this method depends entirely upon the policy of the company. Perhaps if he used real salesmanship, and sold on a quality basis, he would get the same order at a very much nicer margin of profit, but who can say that he would have obtained the order on a quality basis. Meaning that he got the order at a small profit rather than risk losing it altogether. And if he does lose on the cut price method, he can generally use as an alibi, the theory that if a cut price wouldn't take it, certainly no quality talk would.

There you have the salesman's side of it.

The employer's side is even more complicated. The contractor or distributor may need business to keep his labor organization intact; and very likely the small profit received on cut price jobs will tide him over a dull season or until a big job comes along.

We know of an instance in the case of a manufacturing firm, where a large order covering material to be delivered over several months, was taken at a very low price, with just barely enough profit to get thru without a loss. The management took the order purely for the purpose of keeping its men employed, but to their surprise after filling the order it was found that they had made more money in those few months than for any other period of the year. Of course volume production did the trick there.

The danger in the cut price method, particularly in the in-

sulation business, lies not so much in the small margin as in the ever present temptation to "cheapen" the job when the price is cut, so that a better margin of profit will be shown—the final result being loss of confidence on the part of customers.

The moral of all of which appears to be—Cut the price when you must but don't cut the quality.

WAGE NOTES

Boston, Mass. The agreement with Boston Pipe Coverers provided that any request for increase in wage prior to April 1st, 1928, should be settled by arbitration. In view of the general increase in Boston wages, however, it was thought advisable by the Boston Employers to grant an increase to Pipe Coverers, and effective as of April 1st, 1926, mechanics' wage became $1.25 per hour, this to run until April 1st, 1928. The Boston Employers have also adopted an apprenticeship system similar to that now operating in New York.

Buffalo, N. Y. Wage rate in Buffalo has been increased to $1.25 per hour, the agreement running until May 1st, 1927.

Grand Rapids, Mich. The present wage paid Pipe Coverers in Grand Rapids, is $1.12½ an hour; while this change is not recent, the latest rate we had on record was $1.00.

Louisville, Ky. Mechanics in Louisville are at present receiving $1.15 per hour; agreement expires September 30th, 1926.

New York City, N. Y. The New York Local No. 12, and New Jersey Local No. 32, have at last settled the wage agreement, and effective as of March 1st, 1926, rates are $12.00 per day for mechanics, $9.00 per day for helpers. The agreement expires December 31st, 1927.

Members of Connecticut Local No. 33 have been on strike since April 3rd pending outcome of negotiations at present under way which have not as yet been settled.

BUILDING STATISTICS

The figures reported by the F. W. Dodge Company on building contracts awarded during March showed an interesting increase over February, the figures being 15,641 new projects in March, against 10,048 in February, a total of 85,933,400 square feet of floor space in March against 54,843,500 in February, with a valuation of $597,879,300 in March against $389,899,800 in February.

Just at the moment building activity in the Philadelphia section is very slow, outside of the Sesqui buildngs whch are being rushed to completion.

Need for Asbestos Knowledge

The average layman is so meagerly informed about Asbestos that it behooves every man engaged in the industry to get as much specific knowledge in his particular line—and out of it—as possible.

Every salesman and other contact man should be able to answer the oft asked question "Where is most of the Asbestos used?"

If the word "most" in this question means tonnage, then the right answer is "Pipe and Boiler Coverings and Cements".

If the word "most" means value at the mines then "Brake Linings and Steam Packings" is the answer.

Not long ago a bright young man, a student at the University of Pennsylvania came to the office with a questionnaire which had been prepared by his professor. The lad was given a week to get the information asked for and then was expected to prepare a thesis on the production, manufacture, use and marketing of asbestos and asbestos products. He confessed that he had been to three offices of large, well known asbestos concerns and had been sent from one to another each suggesting that the other was better qualified to answer his questions.

I fear these were busy men who didn't want to stop long enough to help but, frankly, after looking over the list of questions I could not blame anyone for trying to duck.

At the same I have a sneaking suspicion that the information required to answer this questionnaire was not possessed by the sales forces referred to.

Only the other day in a conversation with the Purchasing Officer of one of the largest buyers of Asbestos Goods in the country, this man said "Oh that salesmen could and would bring us information! Nearly all of them sing the same song, 'My goods are the best' or 'My factory is the largest' or 'My price is the lowest'. What we want and are willing to pay for is service and that includes intelligent answers to possibly unintelligent questions, asked by us out of an abyss of ignorance of

your business."

This particular man has many times asked me questions which should have been answered by the salesman regularly calling on him, but were not because the salesman had never troubled to become informed along general lines.

It is so evident that the informed salesman has a tremendous advantage in these times of highly competitive business.

"But where is the information obtainable?" you ask. Well, the files of "ASBESTOS", running over a period of seven years, contain a lot of it. Your own organization has worlds of data if you will trouble to search for it.

Go back to school and follow the methods of the student. Ask questions, more questions and still more. Make notes, index and cross index them until you can start out with a feeling that any reasonable question asked of you will find you ready with a convincing answer.

And it will astonish you how rapidly sales resistance melts before real knowledge.

Hollywood Asbestos

Readers will probably recall our mention in the April 1924 issue of "ASBESTOS" of the Asbestos Mining and Manufacturing Company at Hollywood, Ga., which at that time was entering the Asbestos Field with an Amphibole Asbestos of high heat and acid resisting qualities. Later we published an article by Mr. Schaaf-Regelman "Chrysotile vs. Amphibole" in which we pointed out the several uses of each variety and the superiority of Amphibole for certain uses.

The Asbestos Mining and Mfg. Company has never ceased its development of the property, and since October 1923 has expended more than $150,000 in such development. A new process has been installed for fiberizing the rock, and fibre is now being produced in three shades of buff, one of dark brown, a near red, and two shades of white. While it is naturally, a short fibre, it is very clean and the several grades in each color fit it for different uses. The coarser fibre is especially suited for the first or brown coat in plaster, while the "fines" are used in the finishing coat. Other grades are being purchased by rubber, flooring and roofing companies, also for stucco.

A remarkable thing about Hollywood Asbestos is its freedom from impurities. Dr. L. C. Glenn, Geologist of Vanderbilt University, who has made a thoro inspection of the property and analyses of the asbestos rock, says "It is a pure Amphibole Asbestos, 95% pure asbestos, while the slip or Canadian is about 6½% pure Chrysotile asbestos."

In the fee simple tract of 22 acres owned by the Company, there is practically no waste material. It contains, besides asbestos, large quantities of muscovite mica, a high grade kaolin, a pigment clay, rose quartz (excellent stucco dash) feldspar, soapstone and some talc. The company also owns unencumbered wood, water and mineral rights on an adjoining tract of 25 acres, and on a 100 acre tract some miles distant from the 22 acres at Hollywood. The explorations have exposed several hundred thousand tons of asbestos on the 22 acre tract and more than 100,000 tons of muscovite mica, while there are larger estimated tonnages of these minerals on the other tracts.

The Hollywood deposits are most favorably located along the Tallula Falls Branch of the Southern Railway. By gravity the crude material can be carried to the mill and thence the product can be loaded immediately into cars for shipment.

Mr. Abb Landis, who largely owns the Asbestos Mining and Manufacturing Company is a professional man and not a captain of industry, but he has installed a plant with capacity for considerable daily production and is successfully placing asbestos fibre on the market. Mr. Landis feels, however, that the company is in need of a manager or of younger and more practical men as owners. The company has a large demonstrable value, and an interest could be purchased by such men in the company, which is a going concern, developed beyond the experimental stage.

MARKET CONDITIONS

General.

Business in general is quite satisfactory. To quote *Forbes* "Banking, industrial, business, transportation and labor conditions are healthy."

The steel output in March broke all records, and the materials shipped are being put in actual use, **not** stored up to increase inventories. The automobile line is showing most satisfactory demand.

Of course the factor receiving most attention at present is the British strike. It is too early to predict with any exactness the effect of the strike on the Asbestos Market. The possibilities for good or ill are too numerous and nebulous to attempt to discuss at the moment.

Raw Material.

Probably the best indication of the raw market is the interest being displayed in new deposits or deposits formerly worked but which, owing to low price and lack of demand, have lain dormant for some years.

Demand for Crudes and Fibres is good. This is particularly true of Blue Asbestos, the producers of blue being unable to satisfy the demand.

Manufactures.

With the exception of shingles, the season for which is now fully opened up, demand in the manufactured asbestos lines is not showing the hoped for improvement. Prices are none too good altho in one or two lines, paper for instance, they have stiffened slightly.

The insulation market, naturally, is not at its best, as its "season" is over, but taking that circumstance into consideration, it is fairly good after all.

Foreign Market Comment.

The asbestos market situation in England is reported as remaining without much fluctuation, prices in most lines appearing to be fairly well stabilized. The usual price-cutting competition goes merrily along for covering

jobs of all descriptions, and perhaps in no department of the Asbestos Industry is competition keener.

The improvement in trade, so generally anticipated at the beginning of the year, has not in fact materialized. Certain sections, like the Motor Manufacturing Industry, are prospering, which naturally influences the success of manufacturers of Brake Lining. Jointing has a poor market, but the demand for Asbestos Cement Tiles continues steady with the development of building operations.—(*The above was, of course written before the strike went into effect.*)

In Italy general conditions are highly favorable. Unemployment is practically non-existent, altho there has been in the Asbestos Industry a comparative lull in enquiries during the last few months. The Chemical Industries are making rapid strides and absorb a large quantity of Asbestos Cloth of various descriptions. Jointing is in great demand and lagging work at the chief naval ports is quite brisk. A fairly substantial duty on imported asbestos goods operates fairly effectively to prevent external competition, but in any case the national feeling runs so high today in Italy that local patriotism demands that preference shall be given to Italian manufacturers, particularly, of course, for national requirements. The result is that all the asbestos factories in Italy are fully engaged.

In France, as in Italy, the Asbestos manufacturing activity is most marked, but the instability of the franc undermines confidence and therefore trading profits are not always realized without considerable loss.

ASBESTOS

This page devoted each month to the discussion of brake lining activities by O. B. Towne, Commissioner of the Asbestos Brake Lining Association

The 1926 Data Books are on the press. One hundred fifty-nine thousand, five hundred books are being printed this year. This is about twenty thousand more than last year. The book contains four more pages of brake lining figures and one more page of clutch facing figures than last year's book. These additional pages are the result of the 1926 specifications for both brake lining and clutch facing and the new cars which have been brought out. The new figures are net, because the book still contains the specifications for cars that are no longer manufactured, in order to give service to those old cars still in use.

Brake testing campaigns are going on all over the country and the supplies for that purpose are being ordered by this office every day. Very few campaigns were conducted during April but the number for May and June is pretty large. These campaigns will be of daily occurrence in some parts of the country from now on until late in the fall. Literally, hundreds of thousands of cars are tested each year. The Association is very active in assisting the local bodies which are putting on these tests.

The Association held its April meeting at Atlantic City at Hotel Traymore and its May meeting at the Waldorf in New York.

The Asbestos Brake Lining Association will move its headquarters into the F. T. Ley Building, Corner of 57th Street and Madison avenue, on June 1st. The number is 578 Madison avenue, and the room is 1009. The building in which it is now located is to be torn down to make room for the new "Salmon Towers" building which is to go up on the old site.

A recent address by one who is a candidate for a hero medal, featured the number of crazy things pedestrians do at street crossings. Having done a number of those same things myself, I agree with him. Most pedestrians are crazy—we are going to admit it for the sake of argument but, like the street sparrow, we got that way dodging vehicles which didn't give a whoop whether they ran over us or not, or which couldn't have stopped in time even if the driver had wanted to do so. No! No! This is no excuse for poor brakes and poor braking.

Cooperation in Arizona

Whenever Mr. E. Schaaf—Regelman goes a travelling, he has something to say for publication. (We wish all our readers would follow his example). You will all remember his comments on the European asbestos situation, published recently, and having just returned from a two-weeks trip to his mines in Arizona, he sends us his views on cooperation in the Arizona Asbestos District, as expressed in a letter written by Mr. Regelman to a resident mining engineer in Globe, this engineer representing another asbestos mining company in that section.

Mr. Regelman's letter follows:

"As pointed out to you in our recent interview in Globe, cooperation between the various asbestos mines in Gila County, and eventually a consolidation of their interests and acquisition of a number of promising individual holdings would be a great step forward to the establishing of a permanent asbestos production in Arizona.

"However, cooperation should first be directed toward the building of a better and shorter road into the McMillan mining district, and my activity in this field since 1915 enables me to make unhesitatingly the statement that transportation difficulties alone are responsible for the fact that most operators cannot derive any profit from mining asbestos in Arizona.

"I do not exaggerate in the least, when I say that the present situation in Arizona may become a national calamity in times of stress, if, for instance, Great Britain should be involved in a war and should require all Canadian asbestos, having none to spare for the United States. Our experience during the last war has shown how dangerously near we have come to such a situation.

"The United States today is by far the largest consumer of asbestos in the world, receiving 80 to 85% of the Canadian production, and we also draw heavily from the South African supply. Our own production covers but a small fraction of 1% of our constantly growing needs and yet we have in Arizona probably the largest asbestos

reserve of any in the world, and certainly the richest deposits of the highest quality of asbestos known to exist anywhere.

"The paradox therefore exists that the United States is the largest consumer and the smallest producer of asbestos and yet the owner of the largest deposits thereof, which in richness and high quality are positively unequaled.

"In normal times the asbestos manufacturers are satisfied to buy their raw material where they can get it cheapest, but in times of stress, if foreign supplies should be cut off, everybody would rush to Arizona and try to do overnight what has been neglected for a decade; speculation, inflation, failures and calamities would be the inevitable result, all of which can easily be avoided by a far-sighted and constructive policy on the part of those who shape the destiny of Arizona and Gila County, and as you are on the ground and can confer with the officials in question, I wish to add my voice to your utterances on the subject and am writing this letter to be used as you may see fit in support of your endeavors to obtain a good road from Globe into the McMillan mining district and so open up asbestos and other mining properties in the neighborhood."

Crocidolite Jewelry

It is not commonly known that Crocidolite in the form jewelry is found in considerable quantities in South Africa. This material, which is utilized largely for ornaments, and is known locally as "Cat's Eye" or "Tiger Eye" has been formed from blue asbestos by chemical alteration and infiltration.

The oxidation of the iron has brought about a change from blue to brown and the deposition of silica by infiltration of solutions of that substance between the fibres, is responsible for the hard brown mineral.

Between the original blue mineral, with its separable fibres and the hard product, there is every transition in respect to color and compactness.

Tests on Brake Linings

United States Bureau of Standards laboratory tests of the asbestos textile brake lining materials, which are almost universally used in automotive vehicles, show that there is a pronounced decrease in coefficient of friction when the linings are operated under test conditions which cause a rapid increase of temperature of several hundred degrees. These tests have been paralleled by a series of experiments with the brakes on a conventional design of passenger car in actual service.

Particular attention was devoted to a study of changes in braking ability with changes in temperature. Test equipment made it possible to obtain measurements of the temperatures of the brake linings, the pressure applied at the foot pedal, and the braking ability.

In general, all tests made with conventional linings showed the same general characteristic that had been observed in the laboratory tests: namely, a reduction in co-efficient of friction with large increases in lining temperature. One special lining containing no saturant, but being in other respects similar to the other linings, showed no appreciable change in co-efficient of friction with change in temperature.

That a saturant is needed is indicated by the fact that this particular lining in this brief series of tests became blackened and the cotton content charred at the surface and considerably frayed. Nevertheless, the marked difference between the behavior of this lining and the saturated linings indicates that it is the action of the saturant which is almost entirely responsible for decreases in co-efficient of friction with increase in temperature.

It is far more important, the tests show, to develop brake linings with co-efficients of friction which vary over only a comparatively narrow range than to develop linings which under ideal conditions have extremely high co-efficients. Moreover, the tests emphasize the importance of designing the brake mechanism so that satisfactory braking ability will be available even when operating conditions are such that the co-efficient of friction of the lining becomes abnormally low.— *Automobile Topics.*

Rhodesia[1]

Bulowayo District

	January Tons	1926 Value
Nil Desperandum & Sphinx (Afr. Asb. Min. Co., Ltd.)	186	£ 2,834
Pangani (J. S. Hancock)	30	364
Shabanie (Rho. & Gen. Asb. Corp., Ltd.)	1,055	26,341
Lomagundi District		
Ethel (Union & Rho. Tr., Ltd.) Dec.	32	800
Ethel (Union & Rho. Tr., Ltd.) Jan.	28	700
Victoria District		
Gath's (R. & Gen. Asb. Corp., Ltd.)	892	22,291
King and King (A. Asb. Corp., Ltd.)	329	8,215
	2,552	£61,545

Union of South Africa[2]

	January Tons	1926 Value
Transvaal	456	£ 8,181
Cape	235	4,018
	691	£12,199

Mysore Asbestos.

Small quantities of Mysore (India) Asbestos have reached the London market during the last twelve months. This asbestos is of excellent quality, the longer grades making excellent spinning material. According to an official report of mining activity in the Mysore State during the year 1924-5, 150 tons of Asbestos were in one year extracted from one of the mines in the Assam district. Since that time, however, there has been a lull in the output of Asbestos, but a greater interest seems now to be taken in the possibilities of augmenting the output. It has been contended that there are vast areas elsewhere in the States which have not been touched and where systematic exploration is called for. Judging from the

1. Figures published by Rhodesia Chamber of Mines.

2. Figures published by Dept. of Mines and Industries for the Union of South Africa.

report, mining operations in Mysore have been little more, hitherto, than superficial, and it is urged that deeper pits should be sunk in each locality, to test the continuity of the occurrences of the mineral.

Sesqui Notes

By the time some of our foreign readers receive this issue of "ASBESTOS", the Sesqui-Centennial will be open to the public.

Southern Philadelphia at the present time is the scene of much bustling activity, and June first will undoubtedly see most of the stage set for the holding of this great Exposition.

Twenty-two automobile concerns are combining to prepare an exhibit which will occupy 120,000 square feet in the Palace of Transportation.

The Baldwin Locomotive Works will occupy 6,250 square feet of exhibit space.

The Palace of Fashion will undoubtedly be one of the exceptional features of the Exposition.

Many societies, trade associations and the like are planning to hold their conventions in Philadelphia this year.

Plans are being made for pageants, sports, championships and numerous other events of interest to be held in connection with the Sesqui.

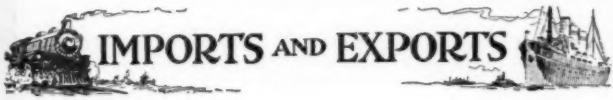
It is impossible to list all the noteworthy features of this great Exposition, but we hope many of our readers will avail themselves of this opportunity to visit Philadelphia.

Automobile Production

The April production figure was slightly under March, being 449,173, while the final March figure was 449,677.

Production of automobiles for the first four months of 1926 was 1,590,074, as compared with 1,344,911 for the same period in 1925.

The automobile dollar is now worth $1.16.



Imports into U. S. A.

Unmanufactured Asbestos.

	February 1925		February 1926	
	Tons	Value	Tons	Value
Africa (Br. South)	9	$ 989	26	$ 2,649
Canada	15,049	444,186	18,316	572,967
Germany	24	5,167	50	5,679
United Kingdom	..	...	90	20,557
	15,082	$450,342	18,482	$601,852

Of the material imported during February of this year, that coming from Germany and the United Kingdom was Crude, while that from British South Africa consisted of 25 tons Crude valued at $2,639.00 and 1 ton of low grade valued at $10.00; material imported from Canada consisted of 2,550 tons of Crude, valued at $181,893, 6,012 tons of Mill Fibre valued at $261,606, and 9,754 tons of lower grade material valued at $129,468.

Manufactured Asbestos Goods:

	February 1925		February 1926	
	Pounds	Value	Pounds	Value
Yarn—				
United Kingdom	3,559	$ 1,602	18,778	$ 5,178
Fabrics, Woven—				
United Kingdom	15,865	10,838	7,845	3,865
Fabric, Packing—				
United Kingdom	1,996	563	464	243
Packing, Not Fabric—				
Germany	4,437	664	...	...
Canada	19	9	3	3
	4,456	$673		
Shingles, Slate, Wood and Lumber—				
Belgium	808,558	11,239	902,195	13,520
Canada	39,499	767	...	...
Germany	40	10	...	...
Netherlands	3,718	110	78,554	1,271
	851,815	$12,126	980,749	$14,791
Asbestos Cement—				
Canada	3,900	108	175	29
Italy	...	...	597,148	10,790

Netherlands	1,775	83	...	...
	5,675	$191	597,323	$10,819

Other Manufactures.

	February 1925		February 1926	
	Pounds	Value	Pounds	Value
Canada	3,489	$ 186	711	$ 43
Germany	304	344	101,712	2,270
Italy	1,515	161	...	...
Netherlands	19,082	359	...	...
United Kingdom	2,620	2,627	8,010	2,556
Total All Manufactures	27,010 *910,376*	$3,677 *$29,670*	116,832 *1,715,595*	$4,869 *$39,768*

Exports from the U. S. A.

Exports of unmanufactured asbestos for the month of February 1926, amounted to 18 tons, valued at $3,627; exports for February 1925 were 88 tons, valued at $8,281.

Exports of manufactured asbestos goods:

	February 1925		February 1926	
	Pounds	Value	Pounds	Value
Paper, Mlbd. & Rlbd.	103,145	$ 6,283	188,116	$17,704
Pipe Covg. & Cement	235,290	14,436	233,392	14,860
Textiles, Yarn & Pkg.	89,588	49,181	139,484	82,447
Brake & Clutch Lining	59,902	42,976	70,854	50,581
Magnesia & Mfrs. of	226,017	15,510	641,516	39,601
Roofing (Asbestos) ...	4,166 sqs.	28,149	4,010 sqs.	24,137
Other Manufactures	127,393	24,743	272,381	22,940

Imports and Exports by England.

Imports of raw material.

	February 1925		February 1926	
	Tons	Value	Tons	Value
From Rhodesia	1,613	£50,521	568	£14,884
From Canada	545	9,894	228	4,513
From Other Countries	576	10,619	407	11,617
Total	2,734	£71,034	1,203	£31,014
Re-Exports	765	26,044	114	4,210

Exports of Asbestos Manufactures.

	February 1925		February 1926	
	Tons	Value	Tons	Value
To Netherlands	15	£ 2,352	37	£ 4,668
To France	47	7,952	25	6,392
To U. S. A.	12	3,335	16	2,384
To British India	100	4,529	711	15,205
To Australia	24	6,620	35	7,120
To Other Countries	773	39,946	1,301	53,607
	971	64,734	2,125	89,376

CYPRUS ASBESTOS COMPANY

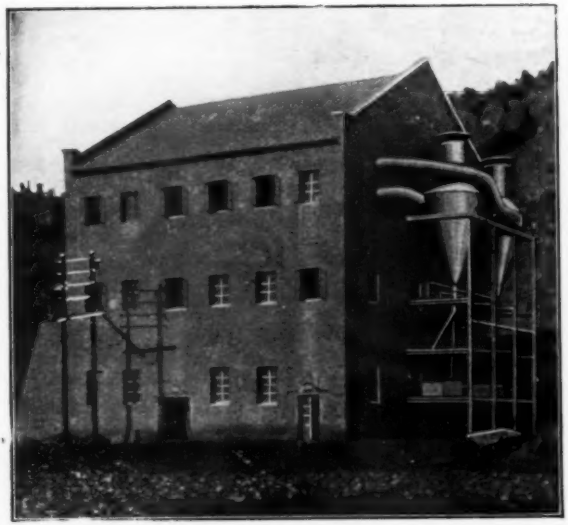
LIMITED

Believing that our many friends will be interested in the extensive additions and alterations we have made and are still making to our milling plant in Cyprus, we propose to reproduce on this page from time to time photographs of various phases of our activities.

Below is a photograph of one of the Company's standard Primary Mills, situated at the quarry face.

Output capacity of each Primary Mill:

One 100 lb. bag partially milled fibre per minute.



The partially milled fibre from each Primary Mill is blended and then passed through the one Finishing Mill, thus ensuring absolute uniformity of quality and grading.

SALES OFFICE:

49 ST. JAMES'S STREET, LONDON. S. W. 1.

Cable Address: Syndigef.

Exports of Raw Asbestos from Canada.

	January 1925		January 1926	
	Tons	Value	Tons	Value
United Kingdom	555	$ 61,475	260	$ 16,250
United States	5,601	323,780	7,347	433,690
Australia	50	5,500	...	...
Belgium	850	46,750	1,590	79,250
Denmark	...	...	60	3,300
France	140	9,250	315	30,370
Germany	300	26,750	210	22,100
Italy	219	14,124	516	24,803
Japan	294	16,585	855	47,375
Netherlands	175	11,150	30	6,000
Total	8,184	$515,364	11,183	$663,138
Sand and Waste—				
United Kingdom	234	4,718	...	...
United States	6,803	72,510	12,794	158,819
Belgium	...	...	50	1,000
France	...	...	30	240
Germany	...	...	51	1,008
Netherlands	90	1,650	30	600
Total	7,127	78,878	12,955	161,667
Grand Total	*15,311*	*$592,242*	*14,138*	*$824,805*

NEWS OF THE INDUSTRY

Birthdays. Our birthday list this month includes Alvin M. Ehret, President of the Ehret Magnesia Mfg. Company, Valley Forge, Pa., who celebrates his birthday on May 15th; Sumner Simpson, President, Raybestos Company, Bridgeport, Conn., on May 17th; M. B. Barkley Vice Presdent and General Manager of the General Asbestos & Rubber Company, Charleston, S. C., on May 27th; and M. S. Sprague, Second Vice President of the Plant Rubber and Asbestos Works, San Francisco, Cal., May 29th. Congratulations to these gentlemen.

United States Asbestos Company. Paul Jones has accepted, as of April 1st, the position of Sales Manager of the United States Asbestos Company of Manheim. Mr. Jones was formerly connected with the True Shape Hosiery Company of Philadelphia, as Sales and Advertising Manager, and while he is some what new to the Asbestos line, his wide experience in merchandising will be of great service to him in his new work.

The Asbestos Corporation of America has removed its New York Offices to 90 West Street, New York City. They were formerly located at 27 Thames Street. The Asbestos Corporation of America can supply fibres for the manufacture of stucco, millboard, wall plaster, asbestos paper, insulating cement, composition flooring, boiler covering cements. They have warehouses in New York, Brooklyn and Newark.

John F. McCue, the genial representative of Smith & Kanzler in New Jersey and Pennsylvania, recently purchased a very handsome new Locomobile 8 roadster. Quite a fancy turnout indeed. It is rumored that Mr. McCue is contemplating a long trip in the near future, but not for the selling of asbestos. He isn't going alone either. Of course he had the girl before he bought the Locomobile 8. Here's our best wishes for his prosperity and happiness.

The U. S. Bureau of Mines, has just issued a pamphlet by Blanche H. Stoddard entitled "Asbestos in 1924", which contains various information as to production, imports and exports, etc., for 1924. Too bad the information arrives so late.

"The Asbestos Industry in Canada" is the title of quite a lengthy article appearing in the March 26th issue of the Canadian Mining Journal, and written by W. G. Ross, President of Asbestos Corporation Limited.

Johns-Manville Co., Limited. Canadians will be interested in the very attractive advertisement of Johns-Manville Co., Limited, appearing in the March 26th issue of the Canadian Mining Journal, with the headline "Keeping Canadian asbestos at home." It advertises products made in the Johns-Manville factory at Asbestos P. Q.

ASBESTOS

The Peking Industrial United Association is asking permission of the Government to work an asbestos mine in Changpink, Metropolitan Area, and to operate an asbestos factory in Peking. Both the mine and the factory will be operated with private capital. The headquarters of the company is to be located at 11 Fuyuchieh, Peking.—India Rubber Journal.

Thetford Mines Curlers. The Curlers Season opened at Thetford Mines on December 16th, 1925 and the last game was played April 20th, between Skips G. M. Anderson and G. J. Morissette. The rinks and scores of this last game were as follows:

L. Rousseau	Robert Duncan
O. Dusseau	J. Ferguson
Dr. C. B. Delarge	Thos. R. Johnston
C. V. Morissette	G. M. Anderson
(Skip)—9	(Skip)—10

National Magnesia Manufacturing Company. Grover C. Elam has joined the forces of the National Magnesia Manufacturing Company in the capacity of Sales Manager. Mr. Elam was formerly connected with a large export firm, and has sold considerable quantities of Asbestos and Magnesia products thruout the Orient and South America.

Republic Asbestos Board Corporation. It is reported by the New York Times that the Republic Asbestos Board Corporation has been recently incorporated in Delaware with a capital of $2,000,000. If any of our readers know the address of this concern or the names and addresses of its organizers, we would be glad to have them advise us so that our service may be brought to the attention of this new company.

Capamianto, S. A. I., Turin, Italy, declared a dividend of 10% in respect of its operations for the year 1925, the turnover being the highest recorded in its history.

"High Pressure Packing Sheets" is the title of an article appearing in the April 17th and April 24th issues of The India Rubber Journal. The article goes into detail concerning the manufacture of these Sheets.

Maurice E. White. Mr. and Mrs. Edmund M. Evans of Curren Terrace, Norristown announce the engagement of their daughter, Miss Rae Wright Evans, and Maurice E. White, also of Curren Terrace.

While Mr. White is not at present connected with the Asbestos Industry, he will be remembered as having served in the Industry for many years as Treasurer of the Norristown Magnesia and Asbestos Company, and also as President of the Asbestos Paper Manufacturers Association.

The Italo Russo Company of Turin have declared a dividend of 10% on their 1925 operations.

Smith-Murray, Inc. Ray E. Hebert, who for some time has been connected with the Construction Department of Johns-

Manville, Inc., is now serving as Insulation Engineer for Smith-Murray, Inc., of Syracuse, New York.

The Johnson Company opened up their Black Lake Mine on May 1st, with a full gang of men.

Cape Asbestos Company, Limited. W. B. Rommel, the Managing Director of Cape Asbestos Company Limited is at present on a visit to South Africa in connection with his Tramway and Asbestos interests.

Major G. L. Burland, Managing Director of Selective Treatment Company, Limited, at Coleraine, P. Q., during a moment of depression on Friday morning, April 23rd, ended his life by shooting himself.

Major Burland is well known to the Asbestos Industry in Canada, and also in Military circles, having been formerly connected with the 15th Field Battery, and serving with that Battery in the World War.

The Keasbey & Mattison Company is installng several hundred thousand dollars worth of machinery for the manufacture of asbestos brake lining, clutch facings, yarn, tapes, etc., in the plant recently purchased by Dr. Mattison at Nelmoor. The name of the station has recently been changed by the P. R. R. from Nelmoor to "Asbestos." The Ambler Asbestos Company is installing machinery in the same plant for the production of both tapered and flat shingles.

Beldam Asbestos Co. Ltd., Hounslow, England, has recently published a revised edition of its "Blue Book of Engine Packings and Joinings." This booklet is well worth examining, especially to anyone interested in the uses of packings.

Samuel Turner of Turner Brothers, Rochdale, Lancashire, has recently been visiting South Africa in connection with his many asbestos mining interests in that country.

The Garlock Packing Co., Ltd., Hamilton, Ont., had an interesting exhibit at the International Textile Exposition held in Boston during April.

W. G. Ross, President of the Asbestos Corporation Limited, is back in the harness again, after undergoing an operation.

PATENTS

Process for producing Light Basic Magnesium Carbonate. No. 1,573,632. Granted on February 16th, to Russell B. Crowell, Agnew, Cal., assignor to Western Industries Company, Agnew. Filed June 26, 1925. Serial No. 39,819.

Described as—in a process of producing light basic magnesium carbonate, the steps which comprise reacting carbon dioxide gas with magnesium oxide, in an aqueous medium until the ratio of CO^2 to MgO lies between the limits of 0.8 to 0.9 and heating the reacted mass to temperature not exceeding 140 deg. F.

Process and Apparatus for Making Gaskets. No. 1,574,124.

Granted on February 23rd, to Chas. Frederick Sherwood, San Francisco, Cal., assignor one half to Lyndon E. Adams, Philadelphia, Pa. Filed October 25, 1922. Serial No. 596,733.

Described as a process of manufacturing gaskets which comprises flowing a sludge containing a liquid constituent and a solid constituent against a mould surface in part wholly impermeable and in part permeable by only the liquid constituent under the influence of vacuum, whereby the solid constituent builds up only a permeable surface, thereby shaping the material into the form of a finished gasket releasing the vacuum and then forcibly passing air thru relatively moist gasket thus formed to drive off liquid from and consolidate the solid material.

Impregnated Insulation. No. 1,574,562. Granted on February 23rd, to Gustave F. Dreher, Schenectady, N. Y. Assignor to General Electric Company. Filed June 9, 1923. Serial No. 644,500.

Described as a porous mineral article permeated thruout with still wax pitch. The process of impregnating Asbestos composition with still wax which consists in modifying said wax by distillation to produce a flow point of about 45 to 50 deg. C., and bringing said modified material into contact with said composition at a temperature of about 220 deg. C. until penetration is completed.

Heat Insulating Material. No. 1,577,495. Granted on March 23rd, to J. A. Scharwath, Elizabeth, N. J., assignor to Seaboard National Bank of the City of New York, Trustee. Filed May 20, 1921. Serial No. 471,278.

Described as a rigid, cellular heat insulating unit comprising a plurality of layers of like material, impregnated with solidifying heat resistng compound to render the unit rigid and smooth, said unit having its cells closed by walls formed with said heat resisting compound.

Clutch Facing, and Process of Making Same. No. 1,578,928. Granted on March 30th, to Sumner Simpson, Bridgeport, Conn. Assignor to the Raybestos Company of Bridgeport. Filed June 4, 1921. Serial No. 475,146.

Also No. 1,578,929, Granted on March 30th. Filed June 4, 1921. Serial No. 475,147.

Described as a clutch facing comprising an element formed of unwoven asbestos fibres, impregnated with a saturant containing a hardening (asphaltic) binder, and cured to give the required strength and hardness, the amount of saturant being from 10 to about 20% of the weight of fibre.

Machine for Cleaning and Opening Up Asbestos Fibre. No. 1,580,699. Granted on April 13th, to Henry Edward Stevenson, Thetford Mines, P. Q., Canada. Filed June 14, 1924. Serial No. 720,083.

Described as a machine for cleaning and opening up Asbestos Fibre, comprising a pair of stationary, cylindrical casings, concentric with a roller rotating in a path concentric with said

casings, the intermediate casing forming a screen between said roller and the other casing and having a raw material inlet and a fibre outlet registering with similar openings in the outer casing, said outer casing having a plurality of dust outlets, adapted to accommodate light and heavy dust.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of "Asbestos" (Insert title of publication.) published monthly (State frequency of issue.)

at Philadelphia Pa (Name of post office and State where publication is entered.) for April 1 1926 (State whether for April 1 or October 1.)

State of Pennsylvania
County of Philadelphia } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared A. S. Rossiter, who, having been duly sworn according to law, deposes and says that he is the Editor (State whether editor, publisher, business manager, or owner.) of the "Asbestos" (Insert title of publication.) and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

	Name of—	Post office address—
Publisher	Secretarial Service	246 N. 12th St. Phila.
Editor	A. S. Rossiter	Blue Bell, Pa
Managing Editor	A. S. Rossiter	" " "
Business Managers	A. S. Rossiter	" " "

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Secretarial Service, composed of
A. S. Rossiter — Blue Bell, Pa
E. C. Cox — 1134 S. 52nd St. Phila Pa

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is.. ______ (This information is required from daily publications only.)

A. S. Rossiter
(Signature of editor, publisher, business manager, or owner.)

Sworn to and subscribed before me this 30th day of March 1926

[SEAL.] [illegible signature]

(My commission expires Jan. 20 1930)

Form 3526.—24, 1926.

Note.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this statement in the second issue printed next after its filing.

POSTMASTER: BE SURE TO READ AND CAREFULLY OBSERVE INSTRUCTIONS ON THE OTHER SIDE.

The Robinson Press
Hatboro, Pa.